REMARKS

The above amendments and the following remarks are fully and completely responsive to the Office Action dated July 12, 2005. Claims 1-5, 7-10 and 12-16 are pending in this application with claims 6 and 11 canceled by the present Amendment. In the outstanding Office Action, claims 1-16 were rejected under 35 U.S.C. § 103(a) (three different rejections). No new matter has been added. Claims 1-5, 7-10 and 12-16 are presented for reconsideration.

35 U.S.C. § 103(a)

Claims 1-4 and 10-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Derby et al. (U.S. Patent No. 5,425,021, "Derby") in view of Adams et al. (U.S. Patent No. 5,436,617, "Adams"). In making this rejection, the Office Action asserts that the combination of these two references teaches and/or suggests the claimed invention. The Office Action also asserts that the combination of these two references would be obvious to one of ordinary skill in the art. Applicant disagrees and respectfully requests reconsideration of this rejection.

Claims 5-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams. In making this rejection, the Office Action asserts that this reference teaches and/or suggests each and every element of the claimed invention. Applicant disagrees and requests reconsideration of this rejection.

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams in view of Cook et al. (U.S. Patent No. 5,687,319, "Cook"). In making this rejection, the Office Action asserts that the combination of these two references teaches

and/or suggests the claimed invention. The Office Action also asserts that the combination of these two references would be obvious to one of ordinary skill in the art. Applicant disagrees and respectfully requests reconsideration of this rejection.

Claim 1, as amended, recites in part:

> ...temporarily disconnecting the third node from the first node to form a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system, which includes the first node, when the received data is not addressed to a downstream node including the third node; and
>
> permitting data transmission within each of the sub-network systems.

Claim 5, as amended, recites in part:

> ...an interface control circuit connected to the packet determiner to temporarily disconnect the second node from the second port to form a first sub-network system, which includes the second node and does not include the data transmission controller, and a second sub-network system, which includes the data transmission controller, when the data is not addressed to a downstream node including the second node, the interface control circuit permitting independent data transmission within each of the sub-network systems.

Claim 9, as amended, recites in part:

> ...an interface control circuit connected to the packet determiner to temporarily disconnect the second node from the second port when the data is not addressed to the second node,
>
> wherein the data transmission controller is one of a plurality of data transmission controllers provided in each of a plurality of nodes configuring a network system, each of the nodes transmitting to other nodes a packet including a physical node number when the network system undergoes a bus reset, and wherein the network information memory stores the physical node number of each node as the node information.

Claim 10, as amended, recites in part:

...an interface control circuit connected to the first and second interfaces, the packet determiner, and the network information memory for controlling the first and second interfaces, wherein the interface control circuit processes the received data when the received data is addressed to the first node, transmits the received data to the third node from the second port when the received data is addressed to a downstream node including the third node, and controls the second interface when the received data is not addressed to a downstream node including the third node to idle the second port and disconnect the second port from the third node to form a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system, which includes the first node, to stop data transmission by the second port to the third node, and to permit independent data transmission in each of the first and second sub-network systems.

Claim 14, as currently amended, recites in part:

...when the first node receives data, comparing at the first node the address information stored in the first node with the address information included in the received data;

temporarily disconnecting the third node from the second port when the received data is not addressed to a downstream node including the third node to divide the network system into a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system including the first and second nodes; and

permitting data transmission within each of the sub-network systems.

Claim 16, as currently amended, recites in part:

...when the first node receives data, comparing at the first node the address information stored in the first node with the address information included in the received data;

temporarily disconnecting the third node from the first node to form a first sub-network system, which includes the

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third node and does not include the first node, and a second sub-network system, which includes the first node, when the received data is addressed to the first node; and

permitting data transmission within each of the sub-network systems.

In contrast, Derby discloses a method of packet data transmission between nodes. Derby, however, does not disclose or suggest temporarily disconnecting a downstream node from a first node to form a first sub-network system and a second sub-network system when the first node receives data that is not addressed to a downstream node. Derby also does not disclose and/or suggest permitting data transmission within each of the sub-network systems. Consequently, Derby alone fails to teach and/or suggest the claimed invention.

Adams discloses a multiport repeater (MPR-A). The multiport repeater receives an in-coming data frame at one port (input port), specifies a port (output port) to which the addressee station of the in-coming data is connected and disconnects the input port and the output port from the remaining ports. Therefore, Adams fails to disclose and/or suggest when one node receives data that is not addressed to a downstream node, the node is disconnected from a downstream node to form a first sub-network, which includes the downstream node and does not include the originating node, and a second sub-network which includes the originating node.

The multiport repeater of Adams simply distributes (transmits) a data frame received at a port to other port(s). However, the multiport repeater does not have a circuit to process a data frame addressed to the multiport repeater. Consequently, the data frame cannot be addressed directly to the multiport repeater.

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In addition, Adams, at column 5, lines 5-9, describes that the multiport repeater distributes the first incoming data frame to all stations, except for the originating station. This feature is the opposite of the feature of the present invention recited above. Consequently, neither Adams alone, or Adams in combination with Derby, teaches and/or suggests the claimed invention.

Cook is not recited for, nor does Cook disclose and/or suggest temporarily disconnecting a downstream node from a first node to form a sub-network system and a second sub-network system when the first node receives data that is not addressed to a downstream node. Similarly, Cook fails to disclose and/or suggest permitting data transmission within each of the sub-network systems. Consequently, neither Cook alone, or in combination with Derby and/or Adams, teaches and/or suggests the claimed invention.

Regarding claim 1, the combination of these three references fails to teach and/or suggest temporarily disconnecting the third node from the first node to form a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system, which includes the first node, when the received data is not addressed to a downstream node including the third node. The combination of these three references also fails to teach and/or suggest permitting data transmission within each of the sub-network systems.

Regarding claim 5, the combination of these three references fails to teach and/or suggest an interface control circuit connected to the packet determiner to temporarily disconnect the second node from the second port to form a first sub-network system, which includes the second node and does not include the data transmission controller,

and a second sub-network system, which includes the data transmission controller, when the data is not addressed to a downstream node including the second node, the interface control circuit permitting independent data transmission within each of the sub-network systems.

Regarding claim 9, the combination of these three references fails to teach and/or suggest an interface control circuit connected to the packet determiner to temporarily disconnect the second node from the second port when the data is not addressed to the second node.

Regarding claim 10, the combination of these three references fails to teach and/or suggest an interface control circuit that controls the second interface when the received data is not addressed to a downstream node including the third node to idle the second port and disconnect the second port from the third node to form a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system, which includes the first node, to stop data transmission by the second port to the third node, and to permit independent data transmission in each of the first and second sub-network systems.

Regarding claim 14, the combination of these three references fails to teach and/or suggest temporarily disconnecting the third node from the second port when the received data is not addressed to a downstream node including the third node to divide the network system into a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system including the first and second nodes. The combination of these three references also fails to teach and/or suggest permitting data transmission within each of the sub-network systems.

Regarding claim 16, the combination of these three references fails to teach and/or suggest temporarily disconnecting the third node from the first node to form a first sub-network system, which includes the third node and does not include the first node, and a second sub-network system, which includes the first node, when the received data is addressed to the first node. The combination of these three references also fails to teach and/or suggest permitting data transmission within each of the sub-network systems.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-5, 7-10 and 12-16 under 35 U.S.C. § 103(a) (three different rejections).
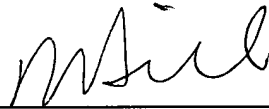
Conclusion

Applicant's amendments and remarks have overcome the rejections set forth in the Office Action dated July 12, 2005. Specifically, Applicant's remarks have distinguished claims 1-5, 7-10 and 12-16 from the cited prior art and thus overcome the rejection of these claims under 35 U.S.C. § 103(a) (three different rejections). Accordingly, claims 1-5, 7-10 and 12-16 are in condition for allowance. Therefore, Applicant respectfully requests consideration and allowance of claims 1-5, 7-10 and 12-16.

Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney by telephone if it is believed that such contact will expedite the prosecution of the application.

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In the event that this paper is not considered to be timely filed, Applicant respectfully petitions for an appropriate extension of time.

The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to our Deposit Account No. 01-2300, making reference to attorney docket number 108075-00051.

Respectfully submitted,
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